REMARKS

Upon entry of this amendment, claims 1-14,16-28 and 55-60 are pending in this application and presented for examination. Claims 55-60 are newly added. No new matter has been entered with the newly added claims. Reconsideration is respectfully requested.

I. NEW CLAIMS

Claims 55-60 are newly added. Claims 55-60 find support in the specification as originally filed. Support is found for example, on page 23, lines 18-29 and claims 50-54 as filed. No new matter has been introduced. Applicants believe that the foregoing claims read on the elected group. Therefore, Applicants request that they be entered and examined on their merits.

II. DRAWINGS

Applicants submit herewith substitute sheets for Figures 4, 6-7, and 9-10 that have already been approved by the Examiner. In view of this submission, Applicants respectfully request that the Examiner accept the substitute drawings and remove all objections with respect to drawings.

III. DOUBLE-PATENTING REJECTION

Claims 1-14, 16, 17 and 24-27 are free of the prior art, but remain rejected as allegedly being obvious over claims 22-36 of co-pending U.S. Patent application No. 09/876,374. In response, Applicants respectfully traverse the rejection.

Applicants believe that the present response places the application in condition for allowance. As such, under MPEP §804, when the Examiner is aware of two co-pending applications that would raise an issue of double-patenting if one of the applications became a patent, a "provisional" double patenting rejection should continue

to be made by the Examiner in each application as long as there are conflicting claims in more than one application unless that "provisional" double patenting rejection is the only rejection remaining in one of the applications. If the "provisional" double patenting rejection in one application is the only rejection remaining in that application, the Examiner should then withdraw that rejection and permit the application to issue as a patent, thereby converting the "provisional" double patenting rejection in the other application(s) into a double patenting rejection at the time the one application issues as a patent.

In view of the present response, the double patenting rejection is the only rejection remaining in the subject application, and U.S. Patent Application No. 09/876,374 is still pending. Therefore, Applicants respectfully request that the Examiner withdraw this double-patenting rejection and allow the present application to issue.

IV. REJECTION UNDER 35 U.S.C. §102(e)

The Examiner has rejected claims 18-23 and 28 under 35 U.S.C. § 102(e) as allegedly being anticipated by Prudent *et al.* (U.S. Patent No. 6,090,543).

The Examiner alleges that Prudent *et al.* teaches dinucleotides comprising intact NTP charge switch probes which have a positively charge R-NH_3+ group attached to the C-5 position of the base through C_{10} or C_6 linkers. According to the Examiner, the NH_3+ group results in a net -1 charge for the NP probe. In addition, positively charged dyes are attached to the phosphates of the first nucleotides. This teaching allegedly anticipates claims 18-23 and 28 of the present invention. In response, Applicants respectfully traverse the rejection.

> MPEP §2131 sets forth: A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).

Prudent *et al.* teaches at column 18, lines 58-67:

> The term "oligonucleotide" as used herein is defined as a molecule comprised of **two or more** deoxyribonucleotides or ribonucleotides, preferably at least 5 nucleotides, more preferably at least about 10-15 nucleotides and more preferably at least about 15 to 30 nucleotides. The exact size will depend on many factors, which in turn depends on the ultimate function or use of the oligonucleotide. The oligonucleotide may be generated in any manner, including chemical synthesis, DNA replication, reverse transcription, or a combination thereof. [Emphasis added].

Prudent *et al.* teach that the oligonucleotides, which are complementary to the target nucleic acid, must be comprised of at least ***two or more*** single nucleotides. The oligonucleotides of Prudent *et al.* ***hybridize*** to a target nucleic acid.

In stark contrast, the present invention provides a "charge-switch **nucleotide** phosphate (NP) probe". The NP probe is a single monomer, having a single base, a single sugar and a least one phosphate group. The term nucleotide is defined on page 8, bridging top page 9 as follows:

> The term "**nucleotide**" as used herein refers to a phosphate ester of a nucleoside, e.g., mono, di and triphosphate esters, wherein the most common site of esterification is the hydroxyl group attached to the C-5 position of the pentose. Nucleosides also include, but are not limited to, synthetic nucleosides having modified base moieties and/or modified sugar moieties, e.g. described generally by Scheit, Nucleotide Analogs (John Wiley, N.Y., 1980). Suitable NTPs include both naturally occurring and synthetic nucleotide triphosphates, and are not limited to, ATP, dATP, CTP, dCTP, GTP, dGTP, TTP, dTTP, UTP and dUTP. Preferably, the nucleotide triphosphates used in the methods of the present invention are selected from the group of dATP, dCTP, dGTP, dTTP, dUTP and mixtures thereof.

The terms "a charge-switch nucleotide phosphate (NP) probe," "a NP probe" and "a charge-switch nucleotide" are used interchangeably and are defined on page 7, bridging to the top of page 8:

> The term "charge-switch **nucleotide**" as used herein refers to a labeled **nucleotide** phosphate (*e.g.*, γ-NP-Dye) that upon

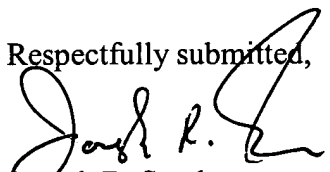
> release or cleavage of a phosphate detectable moiety (*e.g.*, PPi-Dye) has a different net charge associated with the cleavage product compared to the intact nucleotide phosphate probe (*e.g.*, γ-NP-Dye). In certain preferred aspects, the attachment of the dye to the PPi is via a nitrogen in lieu of an oxygen. Preferably, the charge difference between the intact γ-NP-Dye and the PPi-Dye is at least 0.5, and more preferably about 1 to about 4 (*e.g.*, 1.1, 1.2, 1.3, 1.4, 1.5, 1.6, 1.7, 1.8, 1.9, 2.0, 2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 2.7, 2.8, 2.9, 3.0, 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7, 3.8, 3.9, and 4.0).

Under MPEP §2131, a claim is anticipated ***only if*** each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. Prudent *et al.* teaches an oligonucleotide as a molecule comprised of **two or more** deoxyribonucleotides or ribonucleotides. The oligonucleotides of Prudent *et al.* are structurally different and are used for an entirely different purpose than the charge-switch nucleotides of the present invention. As such, Applicants urge that the Examiner withdraw the rejection, and send this application to issue.

V. CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance and an action to that end is urged. If the Examiner believes a telephone conference would aid in the prosecution of this case in any way, please call the undersigned at 925-472-5000.

Respectfully submitted,



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